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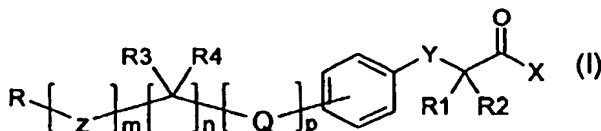
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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: DERIVATIVES OF α -PHENYLTHIOCARBOXYLIC AND α -PHENYLOXY-CARBOXYLIC ACIDS USEFUL FOR THE TREATMENT OF DISEASES RESPONDING TO PPAR α ACTIVATION



(57) Abstract: Formula (I) compounds are described in which the substituents have the meanings described in the text, and which are useful for the treatment of diseases responding to PPAR α activation, such as heart failure, the hyperlipaemias and atherosclerosis.

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INTERNATIONAL SEARCH REPORT

International Application No

PCT/IB/00011

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C07C323/52 C07D209/08 C07C69/712 C07D307/68 C07D209/86
 A61K31/19 A61K31/215 A61P9/10

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C07C C07D A61K A61P

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, BEILSTEIN Data, WPI Data, PAJ, CHEM ABS Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	P.J. BROWN, ET AL.: "A ureido-thiobutyric acid (GW9578) is a subtype-selective PPARalpha agonist with potent lipid-lowering activity" JOURNAL OF MEDICINAL CHEMISTRY, vol. 42, no. 19, 9 April 1999 (1999-04-09), pages 3785-3788, XP002128791 AMERICAN CHEMICAL SOCIETY, WASHINGTON, DC, US ISSN: 0022-2623 table 1	1-7
X	DE 199 40 415 A (F. SPENER) 8 March 2001 (2001-03-08) column 2, line 65 - line 68; figure 2 ----- -/--	1-7

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

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- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- *Z* document member of the same patent family

Date of the actual completion of the international search

25 August 2003

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11/09/2003

Name and mailing address of the ISA

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INTERNATIONAL SEARCH REPORT

International Application No

PCT/I /00011

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	D.A. BROOKS, ET AL.: "Design and synthesis of 2-methyl-2-{4-[2-(5-methyl-2-aryloxazol-4-yl)ethoxy]phenoxy}propionic acids: a new class of dual PPARalpha/gamma agonists" JOURNAL OF MEDICINAL CHEMISTRY, vol. 44, no. 13, 21 June 2001 (2001-06-21), pages 2061-2064, XP002184099 AMERICAN CHEMICAL SOCIETY, WASHINGTON, DC, US ISSN: 0022-2623 table 1, compounds 4-8	1-7
X	GB 1 422 679 A (FUNAI PHARMACEUTICAL INDUSTRIES) 28 January 1976 (1976-01-28) page 1; examples 1,3-10,12-16,19; table 1	1-5
X	D.J. ABRAHAM, ET AL.: "Design, synthesis, and testing of potential antisickling agents. 4. Structure-activity relationships of benzyloxy and phenoxy acids" JOURNAL OF MEDICINAL CHEMISTRY, vol. 27, no. 9, 1984, pages 967-978, XP002024764 AMERICAN CHEMICAL SOCIETY, WASHINGTON, DC, US ISSN: 0022-2623 compounds 44,51; table III, compound 610	1-5
X	W.A. DENNY, ET AL.: "Potential antitumour agents. 36. Quantitative relationships between experimental antitumour activity, toxicity, and structure for the general class of 9-anilinoacridine antitumour agents" JOURNAL OF MEDICINAL CHEMISTRY., vol. 25, no. 3, March 1982 (1982-03), pages 276-315, XP0002250593 AMERICAN CHEMICAL SOCIETY, WASHINGTON, DC, US table I, compounds 615,616,719,721	1-5
X	R.S. RANDAD, ET AL.: "Allosteric modifiers of haemoglobin. 1. Design, synthesis, testing, and structure-activity relationship of novel haemoglobin oxygen affinity decreasing agents" JOURNAL OF MEDICINAL CHEMISTRY, vol. 34, no. 2, February 1991 (1991-02), pages 752-757, XP0002250594 AMERICAN CHEMICAL SOCIETY, WASHINGTON, DC, US table I, compounds 2a,2b,3a-g,4a,4b,5a-j	1-5
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INTERNATIONAL SEARCH REPORT

International Application No

PCT/JP03/00011

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	I. LALEZARI, ET AL.: "Synthesis and investigation of effects of 2-'4-''(aryl-amino)carbonylamino!phenoxy!-2-methylpropionic acids" JOURNAL OF MEDICINAL CHEMISTRY, vol. 32, no. 10, October 1989 (1989-10), pages 2352-2357, XP0002250595 AMERICAN CHEMICAL SOCIETY, WASHINGTON, DC, US compounds 4,6; tables I,II	1-5
X	S.T. HAZELDINE, ET AL.: "Design, synthesis, and biological evaluation of analogues of the antitumour agent, 2{4-'(7-chloro-2-quinoxalinyloxy!-phenoxy}propionic acid (XK469)" JOURNAL OF MEDICINAL CHEMISTRY, vol. 44, no. 11, 28 April 2001 (2001-04-28), pages 1758-1776, XP0002250596 AMERICAN CHEMICAL SOCIETY, WASHINGTON, DC, US tables 1,3	1-5
X	I. SIRCAR, ET AL.: "Phenylenebis(oxy)bis-'2,2-dimethylpentanoic acids: agents that elevate high-density lipoproteins" JOURNAL OF MEDICINAL CHEMISTRY, vol. 26, no. 7, 1983, pages 1020-1027, XP001064059 AMERICAN CHEMICAL SOCIETY, WASHINGTON, DC, US ISSN: 0022-2623 table III, compound 70	1
X	W.D. CROW, ET AL.: "Synthetic applications of intramolecular insertion in arlycarbenes- and alkylthio-1-phenylethylidines" AUSTRALIAN JOURNAL OF CHEMISTRY, vol. 32, no. 1, 1979, pages 111-121, XP0008020680 MELBOURNE, AU ISSN: 0004-9425 compound 26; page 120, paragraphs (f)(i) and (ii)	1
P,A A	EP 1 184 366 A (KYORIN SEIYAKU KK) 6 March 2002 (2002-03-06) the whole document & WO 00 75103 A (KYORIN SEIYAKU) 14 December 2000 (2000-12-14)	1-7

INTERNATIONAL SEARCH REPORT

International application No.
PCT/IT 03/00011**Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)**

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☒ Claims Nos.: 1-5 (in part)
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

International Application No. PCT/IT 03 00011

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.2

Claims Nos.: 1-5 (in part)

The initial phase of the search revealed a very large number of documents relevant to the issue of novelty. So many documents were retrieved that it is impossible to determine which parts of the claims may be said to define subject-matter for which protection might legitimately be sought (Article 6 PCT).

For these reasons it appears impossible to execute a meaningful search and to issue a complete search report over the whole breadth of the claims. The search and the report for those claims can only be considered complete for the compounds prepared in examples 1-26 and their use in medical treatments of other than those responding to PPARalpha activation. The search and the report are, however, complete for the use of compounds of claim 1 for use in the treatment of diseases responding to PPARalpha activation and in the treatment of heart failure, hyperlipidaemias and atherosclerosis.

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guideline C-VI, 8.5), should the problems which led to the Article 17(2) declaration be overcome.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/03/00011

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
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